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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,367	09/21/2001	Peter Hessler	Hessler 1-1-1-3	7867

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EXAMINER	
SOL, ANTHONY M	

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/937,367	HESSLER ET AL.	
	Examiner	Art Unit	
	Anthony Sol	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *22-24,26,28-40,42 and 43* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *22-24,26,28-40,42 and 43* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

- Applicant's Amendment filed 12/23/2005 is acknowledged.
- Claims 22, 26, 28, and 36 have been amended.
- Claims 25, 27, and 41 have been canceled.
- Claims 42 and 43 have been added.
- Claims 22-24, 26, 28-40, 42, and 43 remain pending.

1. The indicated allowability of claims 27, 31-34, and 41 of the non-final Office Action mailed 9/22/2005 is withdrawn in view of the newly discovered references to U.S. Patent No. 6545980 B1 (Dive) and U. S. Patent No. 5,455,832 (Bowmaster). Rejections based on the newly cited references follow.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 22-24, 26, 28-40, 42, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,455,832 ("Bowmaster") in view of U.S. Patent No. 6,545,980 B1 ("Dive").

Regarding claims 22 and 36,

Bowmaster discloses a modified test signal that can cause the network element to change from normal operating state to trouble state by having the signal include a payload pointer value initially having a first pointer value and subsequently having a second pointer value (alteration of a pointer value) different from the first pointer value (detecting frame offset discontinuities)(col. 13, lines 59-63, col. 14, lines 55-58; claim – detecting frame offset discontinuities at the first network element on the basis of detection of an alteration of a pointer value).

Bowmaster further discloses causing a network element to inhibit accumulation of parameters (suspends counting and evaluation of certain tandem connection errors) during a time period (predetermined interval of time) in which the network element is in the trouble state (after detection and signaling of the discontinuity condition) and accumulation of parameters associated with error portions of the modified test signal (col. 14, lines 48-52; claim – after detection and signaling of the discontinuity condition, second network element suspends counting and evaluation of certain tandem connection errors and defect information for a predetermined interval of time).

Bowmaster does not disclose wherein a discontinuity condition detected at the first network element is transmitted to the second network element.

Dive shows in the figure (there is only one figure in the drawing section) that the monitoring device (NIM-first network element) can transmit error messages (frame offset discontinuities) to network management system (NMS-second network element)(col. 3, lines 30-32, lines 45-50; claim – a discontinuity condition detected at the first network element is transmitted to the second network element).

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention was made to modify the testing of a SONET network element as taught by Bowmaster to add the function of a NIM transmitting error messages to a NMS as taught by Dive. One skilled in the art would have been motivated to make the modification so that the NMS can thereby better perform its task of ensuring reliable data transmission (Dive, col. 3, lines 32-35).

4. Regarding claims 23, 28, and 37,

Bowmaster does not disclose a discontinuity condition is signaled to an equipment management system.

Dive discloses that the monitoring device (NIM) can transmit error messages (discontinuity condition) to network management system (NMS-equipment management system)(col. 3, lines 30-32, lines 45-50).

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention was made to modify the testing of a SONET network element as taught by Bowmaster to add the function of a NIM transmitting error messages to NMS as taught by Dive. One skilled in the art would have been motivated to make the modification so that the NMS can thereby better perform its task of ensuring reliable data transmission (Dive, col. 3, lines 32-35).

5. Regarding claims 24, 29, and 38,

Bowmaster disclose that UAS (unavailable seconds) parameter for a monitored

entity (signaled discontinuity condition) is never inhibited and it keeps track (transmission quality report) of unavailable time (col. 12, lines 1-7).

6. Regarding claim 26,

Bowmaster does not disclose discontinuity condition detected at the first network element is transmitted within a defined data element of a virtual container transmitted to the second network element.

Dive discloses one communication possibility for control and monitored function is offered by a data channel such as free bits of POH bytes K3, K4, N1, N2, or G1. These bytes are contained in virtual container (col. 3, lines 45-47).

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention was made to modify the testing of a SONET network element as taught by Bowmaster to add the function of transmitting discontinuity condition within the free bits of POH bytes as taught by Dive. One skilled in the art would have been motivated to make the modification since the free bits of POH bytes are unused.

7. Regarding claim 30,

Bowmaster discloses that when there is frequency offset between the frame rate of the transport overhead and that of the STS SPE, then the pointer value is incremented or decremented as needed, accompanied by a corresponding positive or negative stuff byte (col. 3, lines 66-67, col. 4, lines 1-4).

8. Regarding claims 31, 32, and 39,

Bowmaster discloses that when there is frequency offset between the frame rate of the transport overhead and that of the STS SPE, then the pointer value is incremented or decremented as needed, accompanied by a corresponding positive or negative stuff byte (col. 3, lines 66-67, col. 4, lines 1-4). Bowmaster further discloses if a positive stuff is required, the current pointer value is sent with the I-bits inverted, and the subsequent positive stuff opportunity is filled with dummy information and subsequent pointers contain the previous pointer value incremented by one. Bowmaster still further discloses no subsequent increment or decrement operation is allowed for three frames following this operation (within a standardized range of pointer increment or decrement operations)(col. 5, lines 5-11).

9. Regarding claim 33,

Bowmaster further discloses if a positive stuff is required, the current pointer value is sent with the I-bits inverted, and the subsequent positive stuff opportunity is filled with dummy information and subsequent pointers contain the previous pointer value incremented by one. Bowmaster still further discloses no subsequent increment or decrement operation is allowed for three frames following this operation (within a standardized range of pointer increment or decrement operations)(col. 5, lines 5-11).

Bowmaster still further discloses if a negative stuff is required, the current pointer value is sent with the D-bits inverted, and the subsequent negative stuff opportunity is overwritten with an SPE byte and subsequent pointers contain the previous pointer

value decremented by one. Bowmaster still further discloses that no subsequent increment or decrement operation is allowed for thee frames following this operation.

10. Regarding claim 34,

Bowmaster discloses generating and sending a basic test signal (last valid pointer value is transmitted) and subsequently sending a modified test signal (discontinuity condition) and detecting the modified test signal at the network element to change from a normal operating state to the trouble state (col.13, lines 58-63).

11. Regarding claim 35,

Bowmaster does not disclose wherein the first network element operates as a source network element and the second network element operates as a sink network element.

Dive discloses that the network element that inserts a signal into the transmission path represent a signal source (source network element) and the network element that receives the signal represent a signal drain (sink network element).

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention was made to modify the testing of a SONET network element as taught by Bowmaster to defined the first and second network elements as source and sink network elements. One skilled in the art would have been motivated to make the

modification to follow the conventional scheme of label designation of network elements.

12. Regarding claim 40,

Bowmaster does not disclose means for transmitting a discontinuity condition detected at the first network element to the second network element.

Dive shows in the figure (there is only one figure in the drawing section) that the monitoring device (NIM-first network element) can transmit error messages (frame offset discontinuities) to network management system (NMS-second network element)(col. 3, lines 30-32, lines 45-50; claim – a discontinuity condition detected at the first network element is transmitted to the second network element).

13. Regarding claim 42,

Bowmaster discloses a modified test signal that can cause the network element to change from normal operating state to trouble state by having the signal include a payload pointer value initially having a first pointer value and subsequently having a second pointer value (alteration of a pointer value) different from the first pointer value (detecting frame offset discontinuities)(col. 13, lines 59-63, col. 14, lines 55-58; claim – detecting frame offset discontinuities at the first network element on the basis of detection of an alteration of a pointer value).

Bowmaster discloses that when there is frequency offset between the frame rate of the transport overhead and that of the STS SPE, then the pointer value is

incremented or decremented as needed, accompanied by a corresponding positive or negative stuff byte (col. 3, lines 66-67, col. 4, lines 1-4; claim – after detection of a discontinuity condition, transmitted pointer values are altered stepwise at the first network element).

Bowmaster discloses that when there is frequency offset between the frame rate of the transport overhead and that of the STS SPE, then the pointer value is incremented or decremented as needed, accompanied by a corresponding positive or negative stuff byte (col. 3, lines 66-67, col. 4, lines 1-4). Bowmaster further discloses if a positive stuff is required, the current pointer value is sent with the I-bits inverted, and the subsequent positive stuff opportunity is filled with dummy information and subsequent pointers contain the previous pointer value incremented by one. Bowmaster still further discloses no subsequent increment or decrement operation is allowed for three frames following this operation (within a standardized range of pointer increment or decrement operations)(col. 5, lines 5-11; claim – a pointer value adjustment towards a new valid pointer value and at each step, introduction of a pointer value difference which is within a standardized range of pointer increment or decrement operations).

14. Regarding claim 43,

Bowmaster discloses a modified test signal that can cause the network element to change from normal operating state to trouble state by having the signal include a payload pointer value initially having a first pointer value and subsequently having a

second pointer value (alteration of a pointer value) different from the first pointer value (detecting frame offset discontinuities)(col. 13, lines 59-63, col. 14, lines 55-58; claim – detecting frame offset discontinuities at the first network element on the basis of detection of an alteration of a pointer value).

Bowmaster discloses that when there is frequency offset between the frame rate of the transport overhead and that of the STS SPE, then the pointer value is incremented or decremented as needed, accompanied by a corresponding positive or negative stuff byte (col. 3, lines 66-67, col. 4, lines 1-4; claim – after detection of a discontinuity condition, transmitted pointer values are altered stepwise at the first network element).

Bowmaster discloses generating and sending a basic test signal (last valid pointer value is transmitted) and subsequently sending a modified test signal (discontinuity condition) and detecting the modified test signal at the network element to change from a normal operating state to the trouble state (col.13, lines 58-63; claim – during a time interval necessary for detection and transmission of a frame offset discontinuity, a last valid pointer value received in advance of the discontinuity condition is transmitted).

Response to Arguments/Remarks

- Please see paragraph 1 above concerning withdraw of allowability of claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Sol whose telephone number is (571) 272-5949. The examiner can normally be reached on M-F 7:30am - 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Anthony Sol
Examiner
Art Unit 2662
3/18/2006

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